

cheap drug will in the long run be more expensive, owing to poor response or adverse effects. Other drugs will have to be used to counter these effects, increasing costs.

The pharmaceutical industry can contribute by cutting down on advertising and promotion — a good drug needs no promotion. The Government can contribute by removing the inhuman import tax and GST on medicines.

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### Entry of spermatozoa into the cervical mucosa and transmission of the AIDS virus

**To the Editor:** The phenomenon of entry of spermatozoa into the epithelial cells of the female genital tract has been re-investigated in the light of the controversy over whether spermatozoa could act as a vector for the transmission of HIV and as a possible agent inducing cellular changes resulting in malignant disease.

The remark of Marx<sup>1</sup> that 'Most AIDS researchers think that sperm have little to do with AIDS virus transmission or at least as direct vehicles of the virus' clearly states the general concept that spermatozoa exist purely for the purpose of fertilisation. For this purpose one or a few suffice, and research on reproduction has largely been concerned with this aspect. The fate of the other millions of spermatozoa deposited in the female genital tract has received scant and sporadic attention, often with conflicting results.<sup>2-6</sup>

In the search for vehicles transmitting the AIDS virus and the possible causes of diseases of the female genital tract the fate of these superfluous spermatozoa warrants attention. It was decided to re-investigate the contradictory results<sup>2-6</sup> concerning entry of sperm into the epithelial cells of the genital tract. Rabbits were used for the study because, as in humans, sperm are introduced into the vagina and must proceed to the site of fertilisation via the cervix, a region prone to disease.

Light microscopy (Fig. 1) demonstrates that spermatozoa do enter the mucosal cells of the rabbit cervix in considerable numbers under normal conditions,<sup>7</sup> and as surmised by Miller and Scofield<sup>8</sup> sperm do indeed gain access to epithelial cells of the female genital tract.

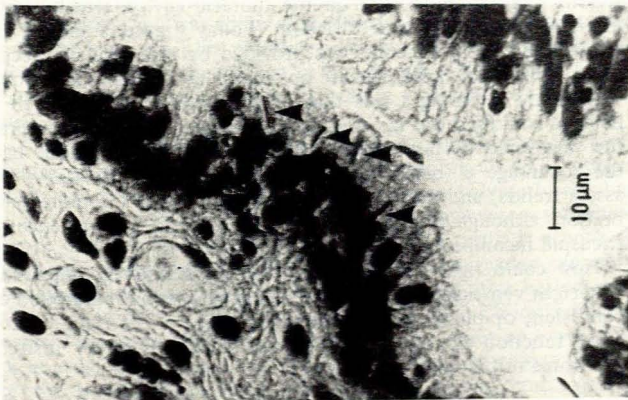


Fig. 1. Longitudinal section through the epithelium of the external orifice of the cervix of the rabbit 8 hours after mating shows many heads of spermatozoa (arrows) deep inside the mucosa (H and E).

The finding of Bagasra *et al.*<sup>9</sup> that under experimental conditions the AIDS virus can penetrate membranes of human sperm therefore provides an explanation for the transmission of the virus into the cells of the mucosa of the genital tract. Entry of sperm into the cervical mucosa over a period of time could also induce cellular change in a region of 'epithelial instability',<sup>10</sup> resulting in pathological conditions.

The fate of spermatozoa in the rectum of male and female rabbits is under investigation.

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### Nursing in the RSA

**To the Editor:** I read the editorial<sup>1</sup> on nursing in the RSA with great interest. It clearly describes the position in which nursing stands today. However, I wish to comment on a few of the suggestions given for addressing the problems.

The very contentious issue of student status in the RSA must be approached with caution. The facts that South Africa is both a First-World and a Third-World country, and that education is costly to both the student and the authorities, demand that student remuneration be such that it does not reduce the number of students. The discontinuation of salaries in favour of bursaries for students could well place a career in nursing beyond the reach of many school leavers.

As regards suggestions for the nursing process, it must be remembered that the nursing process is a scientific method, a methodology of practice, and as such cannot be applied in part only. Furthermore, the methodology comprises four established steps utilised by nursing internationally. The purpose of national review as put forward by the authors is therefore questioned.

The suggestion of flexible duty times is welcomed, since the Hospital and Health Services Branch has always supported and encouraged the utilisation of flexible duty schedules to meet the needs of both patients and providers of health care.

Van Niekerk and Brown are to be congratulated on their suggestions, each one of which opens up definite avenues for exploration.

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